

Date: Wednesday, 1/11/2006 4:11:02 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 23321A
 Estimate Number : 11663
 P.O. Number : N/A
 This Issue : 1/11/2006 S.O. No. : N/A
 Prsht Rev. : NC
 First Issue : N/A Type : LARGE FAB ASSY
 Previous Run : 25435A
 Drawing Name : 206B FLOAT STEP ASSY, RH
 Part Number : D2842042
 Drawing Number : D2841 REV B
 Project Number : N/A
 Drawing Revision : B
 Material : N/A
 Due Date : 1/30/2006 Qty: 2 Um: Each
 Written By : SEE COMMENT BELOW
 Checked & Approved By : SEE ABOVE DATE & USER
 Comment : Est Rev:D As Per Ecn 766 06-01-06 JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2622120C Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 2.0000 Each(s)

Qty	Part #	Description	Batch:
1	D2622-120C	Extrusion	B24092

Check Material for any Dents or Defects

SE 06.02.6 = 2

2.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D28422 using D2622 extrusion as per Dwg D2841

2-Drill extrusion per drawing D2842 using Jig DT 8265

3-Deburr and bevel ends for welding

SE 06.02.6 = 2

SE 06.02.7 = 2

SE 06.02.7 = 2

3.0 D2734 206 Step Endplate



Comment: Qty.: 2.0000 Each(s)/Unit Total: 4.0000 Each(s)

206 Step Endplate

Pick:

Qty	Part Number	Description	Batch
2	D2734	End Cap	B20457

SE 06.02.8 = 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:11:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D284042

Job Number:



Seq. #: Machine Or Operation: Description :

4.0 D34641 mounting plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Lug

Pick:

Qty	Part Number	Description	Batch
1	D3464-1	Plate	

Qty Part # Description Batch
2 D3459-3 lug B25430
2 D3459-1 lug B25429

PTO IS on next page.

5.0 D34643 mounting plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-3	Plate	

6.0 D34645 mounting plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-5	Plate	

7.0 D34647 mounting plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-7	Plate	

8.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Inspect for foreign object per QSI 024

1-Weld end cap(1 END ONLY) and lugs as per Dwg D2841
using Jig DT 8267 followed by DT 8268
A/R AL ROD Batch: M18839

2-Grind end cap welds flush

LC 06-02-8 = 2
FF 06-02-09 = 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:11:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2842042

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

Jan 27
RD 06/02/27

PD

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

a.m 06-02-28

2

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

06-03-01

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Inspect for foreign object per QSI 024

2-Weld Remaining end cap as per Dwg D2841
using Jig DT 8267 followed by DT 8268

A/R AL ROD

Batch:

320757-2

A.E. 06-03-2

2

13.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

PD 06-03-02

2

14.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Touch up Alodine & Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

a.m 06-03-07

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION

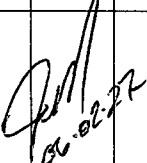
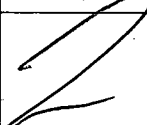
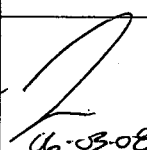


Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

MM 06 03 08

2

Complete w/o on Attached w/o

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
06.02.27	1	Correct style of lugs And Qty AS per Dwg. - change has been made.	 06.02.27			U 06.02.27		
06.03.07	2	1 - MAKE CHANGE TO DRAWING DRILL HOLE TO SIZE 'E' (3 PLACES) INSTEAD OF 'Q'	PH 06.02.08			B 06.03.08	 06-03-08	

Part No: D2841-042 PAR #: N/A Fault Category: Prod/FAB ASS' LARE NCR: (Yes) No DQA: (No) Date: 06.03.15
QA: N/C Closed: (Yes) Date: 06.03.15

NCR: <u>23321</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06.02.22	8	Ends of steps are bent in- wards a little due to welding on the lugs to fast, and heat balled the ends of the steps in.	<i>[Signature]</i> 06.02.22	Weld 1 lug at a time and let parts cool between welds. Steps are Acceptable. See Attached e-mail	<i>[Signature]</i> 06.02.27	<i>[Signature]</i> 06.02.22	<i>[Signature]</i> 06.02.22	<i>[Signature]</i> 06.02.22
06.02.22	2	Holes drilled on both sides of steps. Holes on 4 to be on one side.	<i>[Signature]</i> 06.02.22	Fill holes with weld and grind flush as per QSI 004. See Attached e-mail	<i>[Signature]</i> 06.02.27	<i>[Signature]</i> 06.02.25	<i>[Signature]</i> 06.02.22	<i>[Signature]</i> 06.02.22

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:11:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2841042

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

NAS1329C3KB130

insert



Comment: Qty.: 4.0000 Each(s)/Unit Total : 8.0000 Each(s)

Insert

Pick:

Qty Part Number

Description Batch

4

NAS1329C3KB130 Insert

17.0

MS27039C107

screw



Comment: Qty.: 4.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

4

MS27039C1-07

Screw

18.0

NAS1515H3L

WASHER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description Batch

4

NAS1515H3L

WASHER

19.0

AN960C10L

washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

4

AN960C10L

WASHER

20.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: LARGE FABRICATION RESOURCE 1

1-Install inserts as per Dwg D2842

2-Wing Walk as per Dwg D2842 and QSI 005 4.1

Batch: 110057

A.M. 06-03-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:11:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2841042

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

M

06 03 08

(2)

22.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

C 206/03/10

(2)

23.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Q

06/03/15

(2)

Job Completion



U 06.03.14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

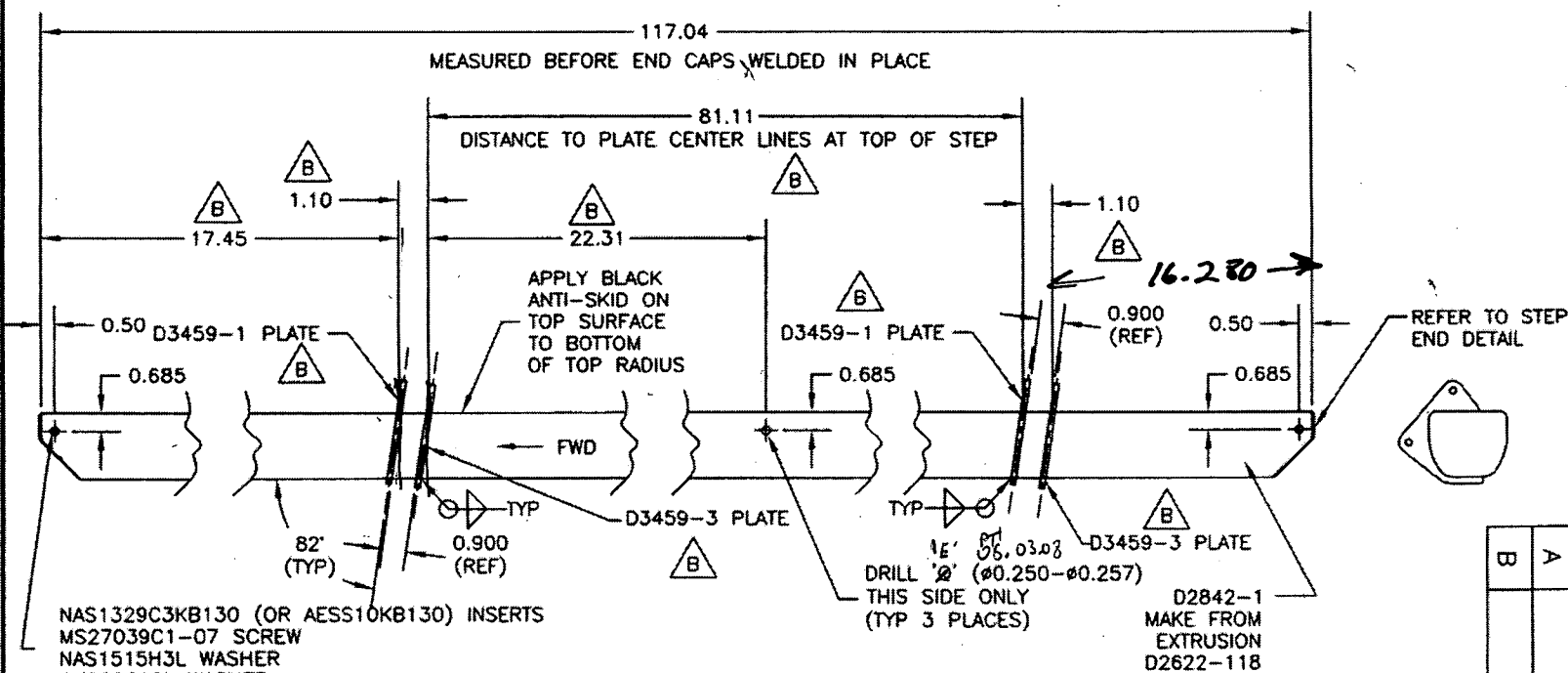
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART



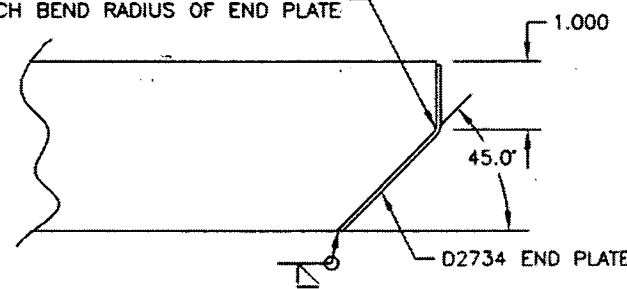
NAS1329C3KB130 (OR AESS10KB130) INSERTS
MS27039C1-07 SCREW
NAS1515H3L WASHER
AN960C10L WASHER
(TYP 3 PLACES)

D2842-041 LH STEP ASSEMBLY (SHOWN)
D2842-042 RH STEP ASSEMBLY (OPPOSITE)

D2842-041/-042 FLOAT STEP ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D2842-041	LH STEP ASSEMBLY
	X	D2842-042	RH STEP ASSEMBLY
1	1	D2622-118	EXTRUSION
2	2	D2734	END PLATE
2	2	D3459-1	PLATE
2	2	D3459-3	PLATE
3	3	NAS1329C3KB130 (OR AESS10KB130)	INSERT
3	3	MS27039C1-07	SCREW
3	3	NAS1515H3L	WASHER
3	3	AN960C10L	WASHER

ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE



TYPICAL STEP END DETAIL
NOT TO SCALE

D2842-041/-042 FLOAT STEP ASSEMBLY

- 1) MAKE FROM EXTRUSION D2622
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
APPLY BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) ALL TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
KE	PH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO. D2842
DATE 05.09.23		TITLE 206L/407 FLOAT STEP ASSEMBLY
		NEW ISSUE
		RE-DESIGN, ADD D3459-1/-3
		SCALE NTS
		SHEET 1 OF 1
		REV. B

05.11.14
RELEASED

Jason Murdoch

From: David Shepherd [davids@dartaero.com]
Sent: February 22, 2006 11:05 AM
To: Jason Murdoch
Subject: Re: new 206 step welding

The steps that bent during welding are acceptable. With respect to the #30 holes that were drilled on the wrong side of the step, fill them with weld per QSI 004 and grind flush.

David

----- Original Message -----

From: "Jason Murdoch" <jmurdoch@dartaero.com>
To: "'David Shepherd'" <davids@dartaero.com>
Sent: Wednesday, February 22, 2006 8:35 AM
Subject: RE: new 206 step welding

> Hi. Are these float steps acceptable from what you saw as is? Next time we
> will weld them with not so much heat in one location. One lug plate at a
> time. Also is it ok to fill the holes that were drilled on the opposite
side

> and grind flush? The holes are #30 luckily so they are tiny to fill in.

>

> jmurdoch@dartaero.com

> Q.C.Inspector

> -----Original Message-----

> From: David Shepherd [mailto:davids@dartaero.com]
> Sent: February 15, 2006 3:17 AM
> To: Peter Hum
> Cc: Jason Murdoch (E-mail); Bill Beckett
> Subject: Re: new 206 step welding

>

> Peter,

>

> Your 206 step design is very similar to the 119 design and we don't have
> this problem on 119 that I know of.

> I would compare the 206 step welding fixture to the 119 welding fixture.

Is

> it possible that the 206 jig isn't restricting the step
> from moving on you? Does the welder have to move around from front to
back?

>

> David

>

>

> ----- Original Message -----

> From: "Peter Hum" <phum@dartaero.com>
> To: "David Shepherd (E-mail)" <davids@dartaero.com>
> Cc: "Jason Murdoch (E-mail)" <jmurdoch@dartaero.com>
> Sent: Tuesday, February 14, 2006 6:06 AM
> Subject: new 206 step welding

>

>

> > Hi David,

> >

> > In welding the new 206 step lugs, there has been some bending of the
step

> > due the heat of the weld. Between the lugs the step is straight. Between
> the

> > lugs and the ends (short distance), the step bends as shown in the
picture.

> >

> > What should we do?

> >

> > 1) Is it allowable to reheat the step in order to bend the step into a
> > straight position?
> > 2) Leave as is?
> > 3) Scrap and rethink weld technique?
> >
> > Thanks
> > Peter
> >
> >
>
>

Date: Monday, 2/27/2006 10:23:28 AM
User: Linda Lacelle







Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : 206B FLOAT STEP ASSY, RH
Job Number : 23321A	
Estimate Number : 11663	
P.O. Number :	Part Number : D2842042
This Issue : 2/27/2006 S.O. No. :	Drawing Number : D2842 REV B
Prsht Rev. : NC	Project Number : N/A
First Issue : 1/11/2006 Type : LARGE FAB ASSY	Drawing Revision : B
Previous Run : 25435A	Material :
Written By :	Due Date : 1/30/2006 Qty: 2 Um: Each
Checked & Approved By :	
Comment : Est Rev:D As Per Ecn 766 06-01-06 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	D2622120C	Extrusion
 		
Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s) Qty Part # Description Batch: 1 D2622-120C Extrusion _____ Check Material for any Dents or Defects		
2.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
 		
Comment: LARGE FABRICATION RESOURCE 1 1-Cut D2842-2 using D2622 extrusion as per Dwg D2841 2-Drill extrusion per drawing D2842 using Jig DT 8265 3-Deburr and bevel ends for welding		
3.0	D2734	206 Step Endplate
 		
Comment: Qty.: 2.0000 Each(s)/Unit Total : 4.0000 Each(s) 206 Step Endplate Pick: Qty Part Number Description Batch 2 D2734 End Cap _____		

Date: Monday, 2/27/2006 10:23:28 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2842042

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

4.0	D34641	mounting plate
-----	--------	----------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Lug

Pick:

Qty	Part Number	Description	Batch
1	D3464-1	Plate	

5.0	D34643	mounting plate
-----	--------	----------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-3	Plate	

6.0	D34645	mounting plate
-----	--------	----------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-5	Plate	

7.0	D34647	mounting plate
-----	--------	----------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3464-7	Plate	

8.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
-----	-------------	------------------------------



Comment: LARGE FABRICATION RESOURCE 1

Inspect for foreign object per QSI 024

1-Weld end cap(1 END ONLY) and lugs as per Dwg D2841
using Jig DT 8267 followed by DT 8268
A/R AL ROD Batch:_____

2-Grind end cap welds flush

Date: Monday, 2/27/2006 10:23:28 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2842042

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Inspect for foreign object per QSI 024

2-Weld Remainig end cap as per Dwg D2841

using Jig DT 8267 followed by DT 8268

A/R AL ROD Batch: _____

13.0

QC5/9

WELD INSPECTION



Comment: WELD INSPECTION

14.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Touch up Alodine & Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Date: Monday, 2/27/2006 10:23:28 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2842042

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

16.0	NAS1329C3KB130	insert
------	----------------	--------



Comment: Qty.: 3.0000 Each(s)/Unit Total : 6.0000 Each(s)

Insert

Pick:

Qty Part Number

Description Batch

34 NAS1329C3KB130Insert

m1000341

FC

17.0	MS27039C107	screw
------	-------------	-------



Comment: Qty.: 3.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

34 MS27039C1-07

Screw

m19522

FC

18.0	NAS1515H3L	WASHER
------	------------	--------



Comment: Qty.: 3.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Qty Part Number

Description Batch

34 NAS1515H3L

WASHER

m19185

FC

19.0	AN960C10L	washer
------	-----------	--------



Comment: Qty.: 3.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

34 AN960C10L

WASHER

m18822

FC

06 0310

20.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
------	-----------------	----------------------------



Comment: LARGE FABRICATION RESOURCE 1

1-Install inserts as per Dwg D2842

2-Wing Walk as per Dwg D2842 and QSI 005 4.1

Batch: m100037

06-03-28

Date: Monday, 2/27/2006 10:23:28 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B FLOAT STEP ASSY, RH

Job Number: 23321A

Part Number: D2842042

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

QC5

INSPECT WORK TO CURRENT STEP



206-03-10

Comment: INSPECT WORK TO CURRENT STEP

22.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ☒

C 206/03/10 (2)

23.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion

